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U.S. Patent Application No. 10/092,796
Declaration of Jonathan Smith
Response filed August 11, 2003

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DECLARATION OF JONATHAN D. SMITH

I, Jonathan Smith, hereby declare as follows:

1. I am president of Berry Works, LLC, Port Edwards, Wisconsin, and have been employed in that capacity since 1997.
2. I received a bachelor's degree in Horticulture in 1987 from The Pennsylvania State University, a master's degree in Horticulture in 1990 from The University of Wisconsin-Madison and a doctorate degree from The University of Wisconsin-Madison in 1993, with my thesis focusing on cranberry production and nutrition.
3. I have over 13 years of experience in the field of cranberry cultivation, having worked as vice-president of research and development for Northland Cranberries Inc., as a production and technology consultant for many individual companies such as River Bend Cranberry LLC, as well as having served as a member of the Wisconsin Cranberry Board representing over 200 members of the Wisconsin Cranberry Growers Association since 1993, including four years as president of the Board.
4. This declaration is in support of patent application Serial No. 10/092,796, entitled "Method for Producing Miniature Cranberries and a Substantially Full Yield Thereof," and is for submission with an amendment filed on or about August 11, 2003. I am aware of the facts and arguments set forth in such amendment.
5. Throughout my career I have dealt with cranberry cultivation. A primary area of my work is to improve the growth and performance of cranberry plants, and, specifically, in growth regulation of cranberries. I am well aware of the nature and performance of other colleagues' work concerning the use of growth regulators in cranberry cultivation.

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6. I have read the principal claims, particularly including claims 1, 20 and 39, which are as follows:

Claim 1. A method for commercially growing miniature cranberries comprising applying to cranberry plants a plant-growth-regulating composition during the bloom period in an amount such that most of the cranberries have a mature mass of less than about 0.6 grams.

Claim 20. A method of increasing fruit set on cranberry plants comprising commercially applying to the cranberry plants of a plant-growth-regulating composition in an amount and at a time such that the plants have a fruit set of at least about 80%.

Claim 39. A yield of miniature cranberries from a cranberry plant wherein most of the cranberries have mature masses of less than about 0.6 grams.

7. I am familiar with references noted in the aforementioned patent application, including *Plant Growth Regulators Alter Fruit Set and Yield in Cranberry (Vaccinium Macrocarpon Ait.)* by Elden J. Stang and Brian A. Birrenkott, ISHS Acta Horticulturae 241, 1989.

8. The treatment and growth regulation of cranberry plants and cranberries present unique problems which have been studied in the cranberry cultivation field; however, the long-standing problems related to the need for a method of increasing fruit set in cranberry plants to at least about 80% have remained unsolved despite efforts at solution.

9. While the Stang and Birrenkott article was published in 1989, I am aware of no one in the cranberry cultivation field who has succeeded in (a) developing a method of producing cranberries with most of the cranberries having a mature mass of less than about 0.6 grams, (b) developing a method of increasing fruit sets in cranberry plants to at least about 80%, or (c) produced a yield of cranberries with most of the cranberries have mature masses of less than about 0.6 grams, despite my extensive experience and contacts within the cranberry cultivation field.

10. The failure of others to develop methods of increasing fruit set to at least about 80% despite the long felt need in the cranberry cultivating community demonstrates that key experts

skilled in the art either failed to or simply did not believe that it would be possible to reach such levels of fruit set.

11. The invention of (a) a method of producing cranberries wherein most of the cranberries have mature masses of less than about 0.6 grams, (b) a method of increasing fruit sets in cranberry plants to at least about 80%, and (c) a yield of cranberries wherein most of the cranberries have mature masses of less than about 0.6 grams was an unexpected result of my work in cranberry cultivation. I did not expect to so significantly surpass the previous levels reached in the academic studies of the prior art, i.e., methods which failed to result in producing a majority of cranberries having mature masses of less than about 0.6 grams, methods of increasing fruit sets in cranberry plants which failed to increase fruit set beyond 57%, and yields of cranberries which failed to include a majority of cranberries with mature masses less than about 0.6 grams.

12. Prior to my invention, the size of cranberries was an unrecognized problem in the field of cranberry cultivation. Specifically, cranberry growers sought only to increase size of cranberries. Restrictions on size exist for cranberries used as fresh fruit and for cranberries used in juicing. The Stang and Birrenkott article references the belief in the cranberry cultivation community that small cranberries are undesirable when it states "Except for fresh market use, reduced fruit size as a result of growth regulator treatment is not a *serious* drawback." While, the Stang and Birrenkott article accepts some reduction in cranberry size as a result of increasing fruit set up to as high as 57%, it does not disclose that reduced cranberry size is either beneficial or desirable.

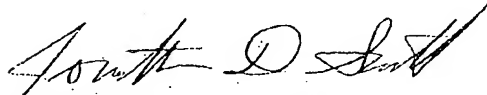
13. The cranberries produced under the claimed methods and the cranberries comprising yields of cranberries with the majority of cranberries having mature masses of less than about 0.6 grams have been very well-received by the cranberry-purchasing community. In 2002, each pound of the claimed cranberries were sold for four times the price of a pound of typical cranberries. This commercial success is further demonstrated by the numerous requests I have received from other cranberry growers to teach them the claimed methods of growing miniature

cranberries and increasing fruit sets.

14. The failure of others to recognize the problem of cranberry size until after my invention is confirmed by the commercial success of the miniature cranberries and the resulting requests from other cranberry growers to teach them the claimed methods of growing miniature cranberries.

15. As detailed above, the claimed invention (1) solved the long-standing, but heretofore unsolved, need for a method of increasing fruit sets in cranberry plants to at least about 80%, (2) was made despite the failure of others to develop the claimed methods or produce the claimed yield, (3) was made despite the apparent skepticism of experts in the field, (4) was an unexpected result of my work in cranberry cultivation, especially in view of the resulting pronounced advantages over the state of the art in cranberry cultivation, (5) addressed the previously unrecognized problem of the size of cranberries and was made despite the previous disdain for small cranberries, and (6) achieved great commercial success due entirely to the miniature cranberries' characteristics.

All statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true; such statements were made with the knowledge that willful false statements are punishable by fine or imprisonment or both (18 USC 1001) and jeopardize the validity of the application or any patent issued thereon.



Jonathan D. Smith, Ph.D.
Dated: August 08, 2003